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# Chuangyuan Patent & Trademark Agency (Suzhou)

Registered agency in China National Intellectual Property Office (Bureau)

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91 Renmin Road, 215002 Suzhou, China

## The Priority Certificate

This certificate is to approve the Priority of following Invention that has been submitted to our office, relative documents see attached.

*Filing Date:* Jan. 24, 2003  
*Application No.:* 03 2 19560.5  
*Type of the application:* Utility Model  
*Name of the invention:* Polishing power tool  
*Applicant:* Positec Power Tools (Suzhou) Co., Ltd.  
*Inventor:* Xuefeng Sun

UDL LEEDS

16 FEB 2003

Approved by:

Mr. Wang Rongchuan

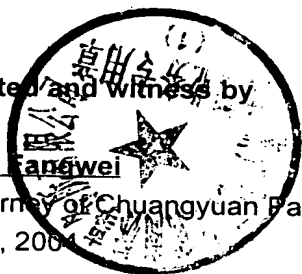
The president of State Intellectual Property Bureau  
Of P.R.China

Jan. 16<sup>th</sup>, 2004

Translated and witness by

Mr. Sun Fangwei

The attorney of Chuangyuan Patent & Trademark Agency (Suzhou)  
Feb. 7<sup>th</sup>, 2004



### **Abstract**

The present invention relates to a handheld power tool, comprising: a main housing [2] , a rear handle [8] which is mounted on the main housing [2] and a handle [10] which is connected to the main housing[2], base portion of the main housing[2]has buffing member[6], said buffing member[6] has a base plane, said handle[10] comprises two opposite side handles[1] and front handle[4] which is connected between the front end portion of the side handles[1], two opposite disposed side handles[1] are tilting with respect to the base plane of the buffing member. Bending angle of the operator's wrists is small during the buffing process, it leads to labor saving and tireless wrists after a long time operation.

## CLAIMS

1. A handheld power tool, including: a main housing [2] , a rear handle mounted on said main housing [2] and a handle [10] connected to the main housing [2] , a base portion of said main housing [2] having a buffing member [6] , said buffing member [6] having a base plane, characterized in that: said handle [10] comprising two opposite disposed side handles [1] and a front handle [4] connected between the front end portion of two opposite disposed side handles [1] , said two opposite disposed side handles [1] tilting with respect to the base plane of said buffing member [6] .
2. A handheld power tool according to claim 1, wherein two opposite disposed side handles [1] having at least one upwardly arched arcual portion.
3. A handheld power tool according to claim 2, wherein said front handle [4] having a upwardly arched arcual portion.
4. A handheld power tool according to claim 1, wherein a rear connecting member [5] joined between the rear end portion of said two opposite disposed side handles [1] and said rear connecting member [5] cooperatively connected with the rear handle [8] .
5. A handheld power tool according to claim 2, claim 3 or claim 4, wherein front end portion of two opposite disposed side handles [1] smoothly transformation then connected with side end portion of said front handle [4] , rear end portion of two opposite disposed side handles [1] smoothly transformation then connected with the side end portion of said rear connecting member [5] .
6. A handheld power tool according to claim 1, wherein said handle[10] further comprising a front connecting member [3] , two end portion of said front connecting member [3] respectively secured to said two opposite disposed side handles [1] , said front connecting member [3] fixedly mounted on said main housing [2] .
7. A handheld power tool according to claim 1, wherein two opposite disposed side handles is tilting from back to front gradually arising.

## **DESCRIPTIONS**

### **Handheld power tool**

#### **Technical field**

The present utility model relates to a handheld power tool.

#### **Background Information**

In the prior art, handheld power tools comprising main housing, rear handle mounted on the main housing and handle connected to the main housing, base portion of said main housing has buffing member, said buffing member has a base plane. Handle and base plane of the buffing member are parallel. During the process of buffing a workpiece, operator's wrists bends a large degree, shown as Fig.4 and Fig. 6, thus the operator could be easily tired. Pressure applied by operator's arm takes effect on the buffing member laboriously.

#### **Invention Content**

It is an object of the present utility model to provide an easy operated handheld power tool.

The present utility model has the proposal that: a handheld power tool, including: a main housing, a rear handle mounted on the main housing and a handle connected to the main housing, a base portion of said main housing has a buffing member, said buffing member has a base plane, said handle comprises two opposite disposed side handles and a front handle joined between the front end portion of said handles, said two handles are tilting with respect to said base plane of said buffing member.

Comparing with the prior art, the present utility model has the following advantages: during the process of buffing a workpiece, because side handles are tilt, operator's wrists bends a small degree, pressure direction of the operator's arm is the same as that of main housing applied on the workpiece, it leads to labor saving and tireless wrists.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

FIG. 1 shows a front view of the present utility model;

FIG. 2 shows a top view of the present utility model;

FIG. 3 shows a perspective view of the present utility model;

FIG. 4 shows a handheld power tool using status of prior art;

FIG. 5 shows a using status of the present utility model;

FIG. 6 shows a handheld power tool using status of prior art;

FIG. 7 shows a using status of the present utility model;

FIG. 8 shows a perspective view of the handle in the present utility model; thereinto:

[1]、side handles; [2]、main housing; [3]、front connecting member; [4]、front handle; [5]、rear connecting member; [6]、buffing member; [8]、rear handle; [10]、handle;

### **DESCRIPTION OF THE PREFERRED EMBODIMENTS**

Referring to Fig. 1 to Fig. 3, a handheld power tool, including: a main housing 2, a rear handle 8 which is mounted on said main housing 2 and a handle 10 which is connected to said main housing 2, a base portion of said main housing 2 has a buffing member 6, said buffing member 6 has a base plane, said handle 10 comprises two opposite disposed side handles 1 and a front handle 4 which is joined between the front end portion of two opposite disposed side handles 1, said two opposite disposed side handles 1 is tilting with respect to the base plane of said buffing member 6, two opposite disposed side handles 1 is tilting from back to front gradually arising.

Two opposite disposed side handles 1 have at least one upwardly arched arcual portion, said front handle 4 has a upwardly arched arcual portion. A rear connecting member 5 is joined between the rear end portion of said two opposite disposed side handles 1, and a rear connecting member 5 is cooperatively connected with the rear handle 8. Front end portion of two opposite disposed side handles 1 are smoothly transformation then connected with side end portion of said front handle 4, the rear end portions of the two opposite disposed side handles 1 are smoothly transformation then connected with the side end portion of said rear connecting member 5.

Said handle 10 further includes a front connecting member 3, two end portions of said front connecting member 3 are respectively fixed to said two opposite disposed side handles 1, said front connecting member 3 is fixedly mounted on said main housing 2.

# 证 明

本证明之附件是向本局提交的下列专利申请副本

申 请 日： 2003.01.24

申 请 号： 03219560.5

申 请 类 别： 实用新型

发明创造名称： 磨砂类电动工具

申 请 人： 苏州宝时得电动工具有限公司

发明人或设计人： 学峰

中华人民共和国  
国家知识产权局局长

王 荣 川

2004 年 1 月 16 日

## 权 利 要 求 书

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1、一种磨砂类电动工具，包括本体[2]、设置于所述的本体[2]上的后手柄[8]以及连接到本体[2]上的手柄[10]，所述的本体[2]的底部设有磨砂部件[6]，该磨砂部件[6]有一个底平面，其特征在于：所述的手柄[10]包括两个相对的侧手柄[1]及连接于侧手柄[1]的前端部间的前手柄[4]，所述的两个侧手柄[1]相对于磨砂部件[6]的底平面呈倾斜设置。

2、根据权利要求 1 所述的磨砂类电动工具，其特征在于：所述的侧手柄[1]具有至少一个向上拱起的弧形。

3、根据权利要求 2 所述的磨砂类电动工具，其特征在于：所述的前手柄[4]为向上拱起的弧形。

4、根据权利要求 1 所述的磨砂类电动工具，其特征在于：一个后连接部件[5]连接在两侧手柄[1]的后端部之间，并且后连接部件[5]与后手柄[8]相配合连接。

5、根据权利要求 2 或 3 或 4 所述的磨砂类电动工具，其特征在于：所述的侧手柄[1]的前端部与前手柄[4]的侧端部平滑地过渡连接，所述的侧手柄[1]的后端部与后连接部件[5]的侧端部平滑地过渡连接。

6、根据权利要求 1 所述的磨砂类电动工具，其特征在于：所述的手柄[10]还包括一个前连接部件[3]，该前连接部件[3]的两端部分别固定于所述的两个侧手柄[1]上，所述的前连接部件[3]是固持在本体[2]上。

7、根据权利要求 1 所述的磨砂类电动工具，其特征在于：所述的侧手柄[1]自后向前逐步抬高地倾斜。



# 说明书

## 磨砂类电动工具

### 技术领域

本实用新型涉及一种磨砂类电动工具。

### 背景技术

现有技术中，磨砂类电动工具包括磨砂类电动工具，包括本体、设置于所述的本体上的后手柄以及连接到本体上的手柄，所述的本体的底部设有磨砂部件，该磨砂部件有一个底平面。手柄与磨砂部件的底平面呈平行设置，在对工件进行磨砂操作时，手腕有较大的弯曲角度，例如附图 4 和附图 6 所示，使得手腕易于疲劳。并且手臂所施加的力的分力作用于磨砂部件上，操作时费力。

### 发明内容

本实用新型的目的在于提供一种操作省力的磨砂类电动工具。

本实用新型的技术方案是：一种磨砂类电动工具，包括本体、设置于所述的本体上的后手柄以及连接到本体上的手柄，所述的本体的底部设有磨砂部件，该磨砂部件有一个底平面，所述的手柄包括两个相对的侧手柄及连接于侧手柄的前端部间的前手柄，所述的两个侧手柄相对于磨砂部件的底平面呈倾斜设置。

本实用新型与现有技术相比具有下列优点：

在对工件进行磨砂操作时，由于侧手柄是倾斜的，因此手腕的弯曲角度小，手臂的施力方向与本体对工件的施力方向是相同的，因此对工件加工时省力，长时间操作手腕不会疲劳。

### 附图说明

附图 1 为本实用新型的主视图；

附图 2 为本实用新型的俯视图；

附图 3 为本实用新型的立体图；

附图 4 为现有技术中的磨砂工具在使用时的状态图；

附图 5 为本实用新型在使用时的状态图；

附图 6 为现有技术中的磨砂工具在使用时的状态图；

附图 7 为本实用新型在使用时的状态图；

附图 8 为手柄的立体视图； 其中：

[1]、侧手柄； [2]、本体； [3]、前连接部件； [4]、前手柄； [5]、后连接部件； [6]、磨砂部件； [8]、后手柄； [10]、手柄；

#### 具体实施方式

参见附图 1 至附图 3，一种磨砂类电动工具，包括本体[2]、设置于所述的本体[2]上的后手柄[8]以及连接到本体[2]上的手柄[10]，所述的本体[2]的底部设有磨砂部件[6]，该磨砂部件[6]有一个底平面，所述的手柄[10]包括两个相对的侧手柄[1]及连接于侧手柄[1]的前端部间的前手柄[4]，所述的两个侧手柄[1]相对于磨砂部件[6]的底平面呈倾斜设置，所述的侧手柄[1]自后向前逐步抬高地倾斜。

所述的侧手柄[1]具有至少一个向上拱起的弧形，所述的前手柄[4]为向上拱起的弧形。一个后连接部件[5]连接在两侧手柄[1]的后端部之间，并且后连接部件[5]与后手柄[8]相配合连接。所述的侧手柄[1]的前端部与前手柄[4]的侧端部平滑地过渡连接，所述的侧手柄[1]的后端部与后连接部件[5]的侧端部平滑地过渡连接。

所述的手柄[10]还包括一个前连接部件[3]，该前连接部件[3]的两端部分别固定于所述的两个侧手柄[1]上，所述的前连接部件[3]是固持在本体[2]上。

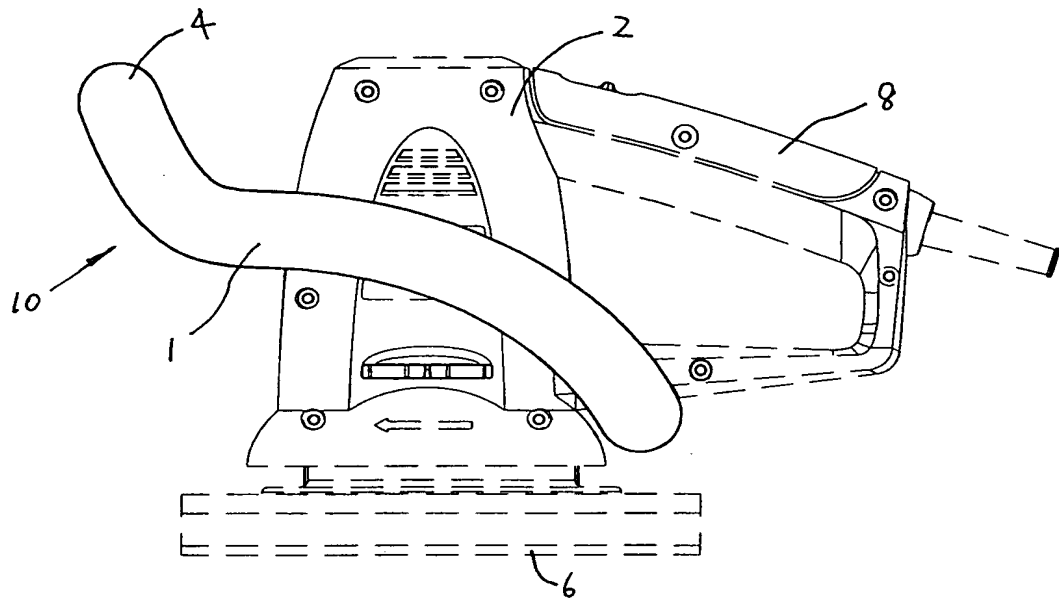


图 1

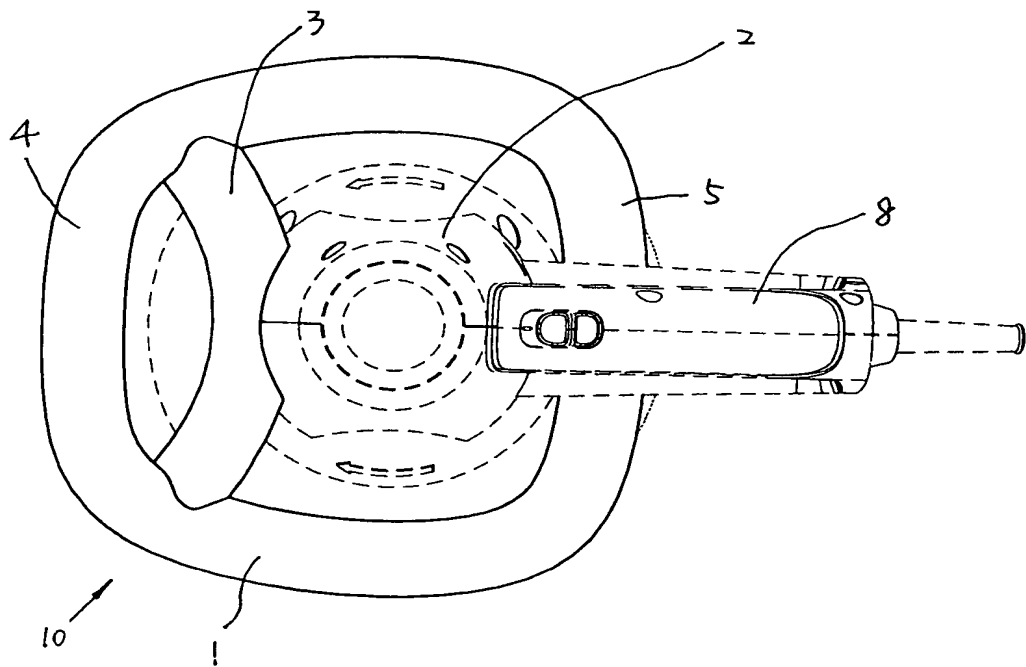


图 2

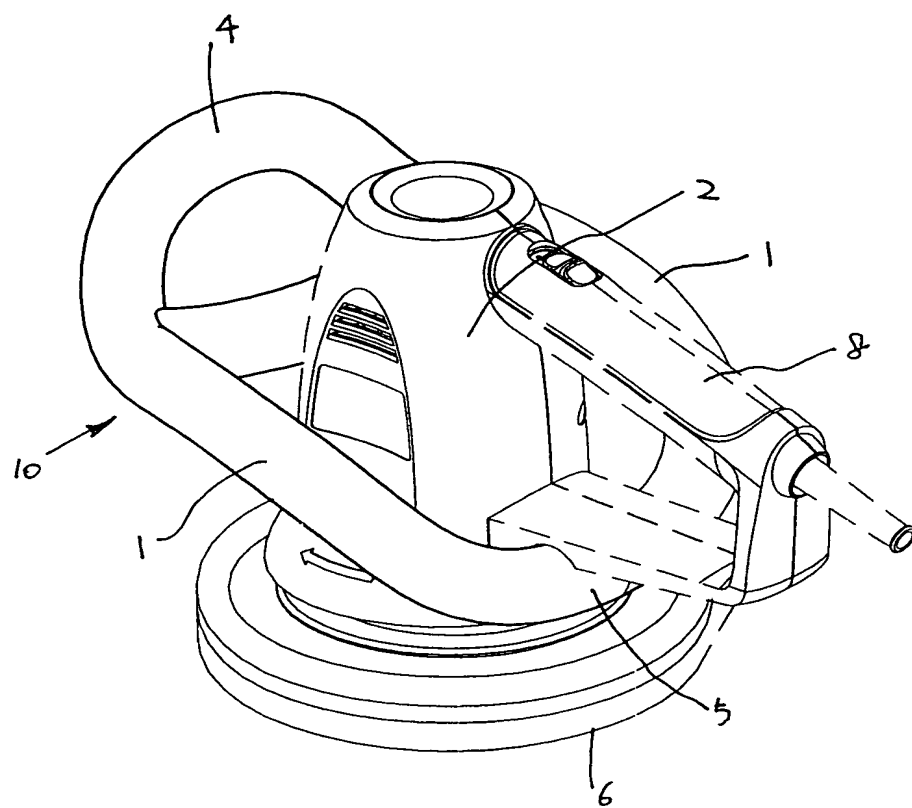


图 3

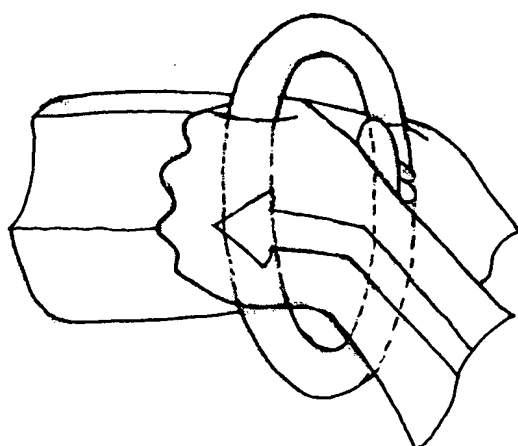


图 4

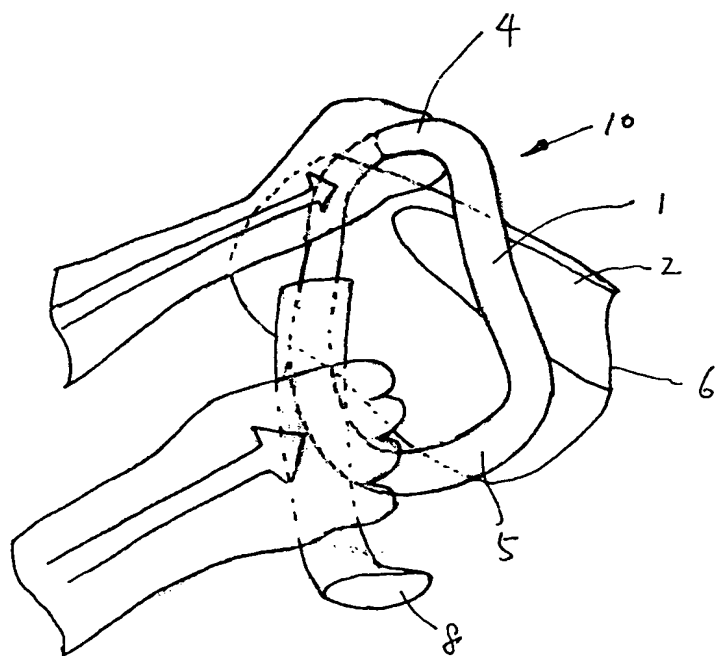


图 5

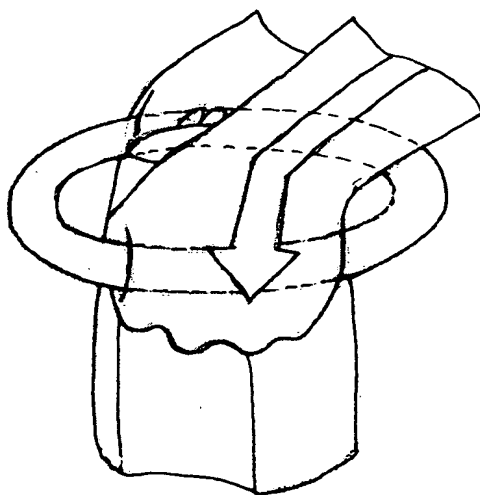


图 6

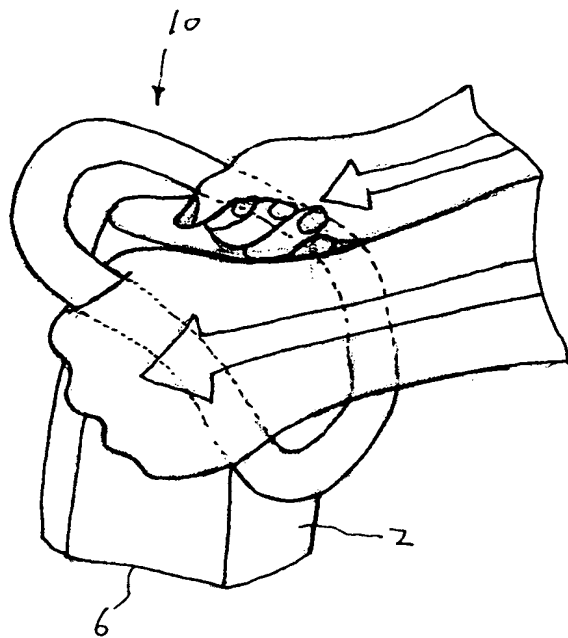


图 7

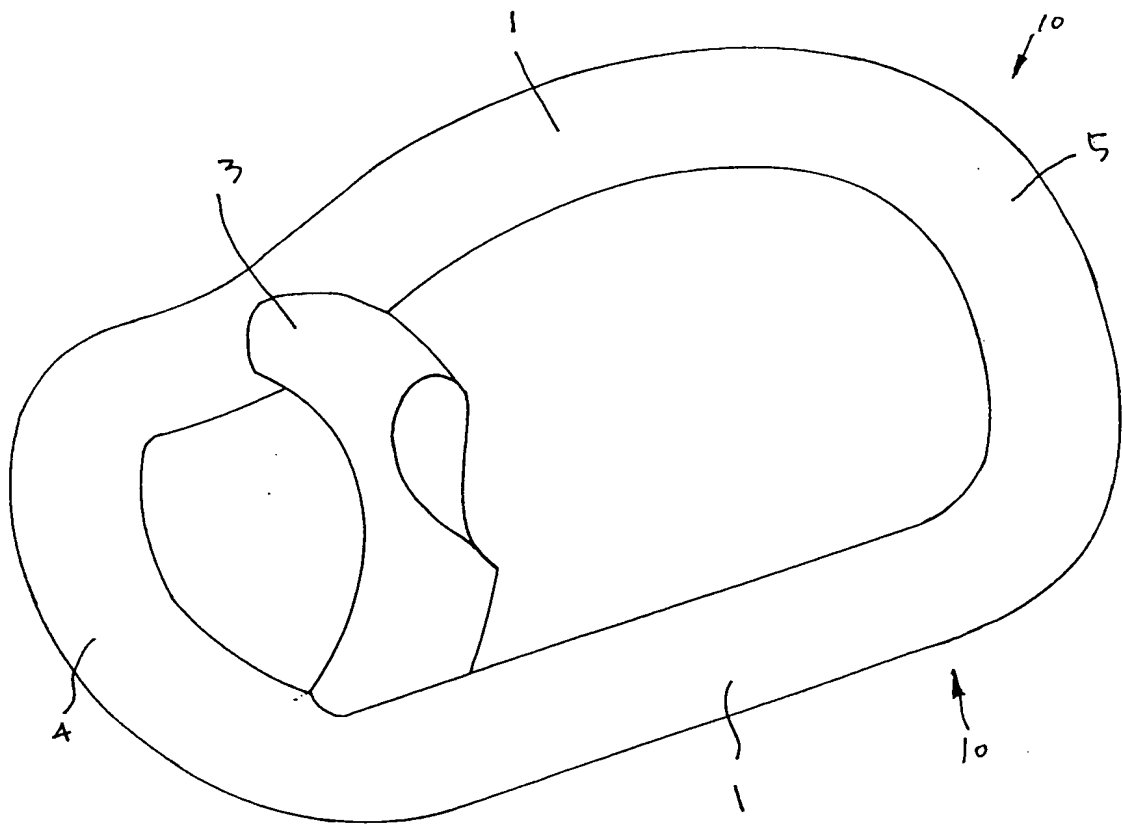


图 8